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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/687,507

10/15/2003

Nan Marie Jockerst

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24504

7590

09/22/2004

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EXAMINER

NGUYEN, CHAU M

ART UNIT

PAPER NUMBER

2633

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/687,507	JOCKERST ET AL.	
	Examiner	Art Unit	
	Chau M Nguyen	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>101503</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 4, 5, 6, 9 and 10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,721,503 B1 (Hereinafter '503). Although the conflicting claims are not identical, they are not patentably distinct from each other because:

as claim 1, '503 discloses bi-directional optical link, comprising:

a thin film detector having an upper surface facing a predetermined direction to receive incident light; and

a thin film emitter stacked over the upper surface and oriented to direct a beam of light toward the predetermined direction ('503, claim 1).

as claim 4, the thin film emitter of '503 comprises a pair of electrical connectors for electrically coupling the thin film emitter to a circuit ('503, claim 2).

as claim 5, the thin film detector of '503 is an inverted metal-semiconductor-metal photo detector ('503, claim 1).

as claim 6, '503 discloses a method for establishing a bi-directional communications link, comprising the steps of:

positioning a thin film detector having an upper surface so as to face a predetermined direction to receive incident light;

stacking a thin film emitter over the upper surface; and

orienting the thin film emitter to direct a beam of light toward the predetermined direction ('503, claim 3).

as claim 9, '503 further discloses the step of providing a pair of electrical connectors for electrically coupling the thin film emitter to a circuit ('503, claim 4).

as claim 10, '503 discloses the step of positioning a thin film detector further comprises the step of positioning an inverted metal-semiconductor-metal photo detector ('503, claim 3).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2633

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krause (U.S. Pat. No. 5,448,077) in view of Simms et al. (Hereinafter "Simms") (U.S. Pat. No. 4,948,960).

As claims 1 and 6, Krause discloses a bidirectional optical link and method establishing a bi-directional optical link, comprising:

a detector (154, fig. 8) positioned having an upper surface facing a predetermined direction (i.e. upward) to receive incident light; and

a emitter (156) stacked over the upper surface; and oriented to direct a beam of light toward the predetermined direction (col. 3, lines 8-24).

Krause does not clearly show thin film emitter and thin film detector as cited in the claimed invention. However, Simms discloses emitter/detector having the thickness of thin film (col. 4, lines 37-48). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention was made to associate thin film emitter/detector as taught by Simms into the teaching of Krause in order to create an optical link for emitting and detecting light with decreasing optical loss and increasing collection (Simms, col. 9, lines 4-6).

As claims 2 and 7, the combination system of Krause and Simms, as described above, shows the thin film emitter (34, see fig. 5) being an vertical cavity surface emitting laser (Simms, col. 7, lines 60-61).

As claims 3 and 8, thin film emitter of Simms is a light emitting diode (Simms, Title).

As claims 4 and 9, Krause mentions a pairs of electrical connectors for electrically coupling the emitter to the circuit (Krause, col. 3, lines 25-27).

As claims 5 , 10 and 11, Krause and Simms do not clearly show the thin film detector is an inverted metal-semiconductor-metal photo detector, and emitter is a substrate-removed semiconductor material. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use such type of semiconductor for detecting optical signal, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

As claims 12 and 13, Krause (fig. 8) shows emitter (156) to be stacked to occlude a portion of the detector (154), in turn, orienting the emitter emitting the beam while the detector receiving the incident light (col. 3, lines 18-22).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goldstein et al. (U.S. Pat. No. 5,712,864) is cited to show photon duplex transceiver.


Watson et al. (U.S. Pat. No. 6,281,999) is cited to show optics system for infrared signal transceiver.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau M Nguyen whose telephone number is 571-272-3030. The examiner can normally be reached on Mon-Fri from 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571-272-3022. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.M.N.
Sept. 10, 04


JASON CHAN
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